

CLAIMS

1. A steering system release device for a motor vehicle equipped with electric power-assisted steering comprising, on the one hand, a locking mechanism (9) acting on the steering column (4) or on another part of the steering system (2), and, on the other hand, in combination with the electric assist motor (10) for the steering system (2), control means (12) which receive signals (S2) from at least one vehicle status and/or initiating event detector (15) so as to activate the electric assist motor (10) and to rotate the steering column (4) or translationally drive or otherwise move another part of the steering system (2), through the action of this electric motor (10), until a zero torque or load or a virtually zero residual torque or load has been achieved, in return for which the locking mechanism (9) can be released, the vehicle status and/or initiating event detector being a detector (15) which detects the insertion of an ignition key or of a magnetic card or other means used for starting the vehicle, characterized in that the activation of the electric assist motor (10) for releasing the steering system (2) is automatically interrupted by the control means (12) after a predetermined time (t) in the event that the zero or virtually zero torque or load has not been achieved after this time (t).
2. The steering system release device as claimed in claim 1, characterized in that the activation of the electric assist motor (10) is automatically reversed by the control means (12) after a first predetermined time (t) in order to rotate the steering column (4) or move another part of the steering system (2) in the opposite direction to the initial direction until a zero or virtually zero torque or load has been created on the locking mechanism (9) or until another predetermined time (t') has been reached, this in the event that the

zero or virtually zero torque or load has not been achieved after the first predetermined time (t).

3. The steering system release device as claimed in  
5 claim 1 or 2, characterized in that the electric assist  
motor (10) is not activated if the torque or load on  
the locking mechanism (9) is zero or virtually zero at  
the time when release of the steering system (2) is  
requested.

10 4. The steering system release device as claimed in  
any one of claims 1 to 3, characterized in that it  
comprises a warning indicator (14), such as an  
indicating light, designed to warn of the impossibility  
15 of releasing the steering system (2) on completion of  
the automatic procedures.

5. The steering system release device as claimed in  
any one of claims 1 to 4, characterized in that the  
20 control means (12) receive a signal from a sensor  
detecting the position of the steering system (2), such  
as a sensor detecting the angular position of the  
steering column (4), or a sensor detecting the position  
of another part of the steering system, and in that  
25 these control means (12) are designed to compare the  
signal from said position sensor with a predetermined  
value corresponding to at least one position in which  
the steering column (4) or another part of the steering  
system (2) is immobilized by the locking mechanism (9)  
30 and to then determine the initial direction of rotation  
in which the electric assist motor (10) is driven.

6. The steering system release device as claimed in  
any one of claims 1 to 5, characterized in that the  
35 control means, which intervene to activate the electric  
assist motor (10) as they receive and process the  
signals (S1, S2) from the vehicle status and initiating  
event detectors (15) and from the torque or position  
sensor (13), are formed by an electronic computer (12).